BRUHAT BANGALORE MAHANAGARA PALIKE

Name of work: Construction of RCC Drains and Culverts at BHEL layout and Ayyappa layout and surrounding area in ward No :03, Yelahanka Satellite Town sub Division

JOB NUMBER.: Sl No.6 Est. Amount = 175.00 Lakhs

Sl. No	Description of Work	Unit	No	Dimension L	Dimension B	Dimension D	Quantity	Rate in Rs.	Amount in Rs.
1	Removing and resetting of footpath slab								
	KPWD S.R 2018-19	It. No.	37.66	Pg.No.	270				
	BHEL layout								
	Ch:00-175 1st Main Road	Sqm	2	130.00	1.00		260.00		
	Ch:00-100 1st Cross Road		2	50.00	0.90		90.00		
	Ch:00-100 2nd Cross Road		2	50.00	0.90		90.00		
	Ch:00- 100 3rd Cross Road		2	50.00	0.90		90.00		
	Ch:00- 100 4th Cross Road		2	50.00	0.90		90.00		
	Ch:00- 100 5th Cross Road		2	50.00	0.90		90.00		
	Ch:00-240 2nd Main Road		2	120.00	1.00		240.00		
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road		2	295.00	0.90		531.00		
						Total Qty	1481.00	208.82	3,09,262.42
2	Removing and resetting of kerb stones								
	KPWD S.R 2018-19	It. No.	37.57.	Pg.No.	270				
	BHEL layout								
	Ch:00-175 1st Main Road	m	2	140.00			280.00		
	Ch:00-240 2nd Main Road		2	120.00			240.00		
						Total Qty	520.00	104.94	54,568.80
3	KSRRB300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications.								
	KPWD S.R 2018-19	It. No.	19.10	Pg.No.	130				
	Desilting								
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road		2	295.00	0.45	0.30	79.65		
	New CC Drain								
	BHEL layout								
	Ch:00-175 1st Main Road		2	175.00	1.00	0.90	315.00		
	Ch:00-100 1st Cross Road		2	100.00	1.00	0.90	180.00		
	Ch:00-100 2nd Cross Road		2	100.00	1.00	0.90	180.00		
	Ch:00- 100 3rd Cross Road		2	100.00	1.00	0.90	180.00		
	Ch:00- 100 4th Cross Road		2	100.00	1.00	0.90	180.00		
	Ch:00- 100 5th Cross Road		2	100.00	1.00	0.90	180.00		
	Ch:00-240 2nd Main Road		2	240.00	1.00	0.90	432.00		
	New Kerb								
	Ch:00-175 1st Main Road		2	35.00	0.20	0.20	2.80		
	Ch:00-240 2nd Main Road		2	80.00	0.20	0.20	6.40		
	New Culvert								
	Cross Road		6	6.60	1.50	1.10	65.34		
						Total Qty	1801.19	211.79	3,81,470.43
4	KSRRB M2900-1. Plain cement concrete M10 mix with crushed stone aggregate 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing including cost of materials, labour, HOM complete as per specifications.								
	KPWD S.R 2018-19	It. No.	34.1.	Pg.No.	254				
	New CC Drain								
	BHEL layout								
	Ch:00-175 1st Main Road		2	175.00	1.00	0.15	52.50		
	Ch:00-100 1st Cross Road		2	100.00	1.00	0.15	30.00		
	Ch:00-100 2nd Cross Road		2	100.00	1.00	0.15	30.00		

Sl. No	Description of Work	Unit	No	Dimension L	Dimension B	Dimension D	Quantity	Rate In Rs.	Amount In Rs.
	Ch:00- 100 3rd Cross Road		2	100.00	1.00	0.15	30.00		
	Ch:00- 100 4th Cross Road		2	100.00	1.00	0.15	30.00		
	Ch:00- 100 5th Cross Road	Cum	2	100.00	1.00	0.15	30.00		
	Ch:00-240 2nd Main Road		2	240.00	1.00	0.15	72.00		
	New Kerb								
	Ch:00-175 1st Main Road		2	35.00	0.20	0.10	1.40		
	Ch:00-240 2nd Main Road		2	80.00	0.20	0.10	3.20		
	New Culvert								
	Cross Road		6	6.60	1.50	0.15	8.91		
						Total Qty	288.01	4479.56	12,90,158.08
5	KSRRB M2200-6. Providing TMT Bars Fe 500 steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification.								
	KPWD S.R 2018-19	It. No.	28.8.2	Pg.No.	229				
	One cubic mt 60kg For CC Drain	T	1	37.88			37.88		
	One cubic mt 90kg For Culvert		1	1.92			1.92		
						Total Qty	39.80	72326.98	28,78,613.80
6	Providing and laying plain/reinforced cement concrete for side drains Wall & bottom thickness 15cm using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500,1700, 2200. including cost of materials, labour, HOM complete as per specifications.								
	KPWD S.R 2018-19	It. No.	37.59.2.	Pg.No.	271				
	CC Drain								
	Bottom Raft								
	BHEL layout								
	Ch:00-175 1st Main Road		2	1	175.00	0.90	0.15	47.25	
	Ch:00-100 1st Cross Road		2	1	100.00	0.90	0.15	27.00	
	Ch:00-100 2nd Cross Road		2	1	100.00	0.90	0.15	27.00	
	Ch:00- 100 3rd Cross Road		2	1	100.00	0.90	0.15	27.00	
	Ch:00- 100 4th Cross Road		2	1	100.00	0.90	0.15	27.00	
	Ch:00- 100 5th Cross Road		2	1	100.00	0.90	0.15	27.00	
	Ch:00-240 2nd Main Road		2	1	240.00	0.90	0.15	64.80	
	Side Wall								
	BHEL layout	Cum							
	Ch:00-175 1st Main Road		2	2	175.00	0.15	0.70	73.50	
	Ch:00-100 1st Cross Road		2	2	100.00	0.15	0.70	42.00	
	Ch:00-100 2nd Cross Road		2	2	100.00	0.15	0.70	42.00	
	Ch:00- 100 3rd Cross Road		2	2	100.00	0.15	0.70	42.00	
	Ch:00- 100 4th Cross Road		2	2	100.00	0.15	0.70	42.00	
	Ch:00- 100 5th Cross Road		2	2	100.00	0.15	0.70	42.00	
	Ch:00-240 2nd Main Road		2	2	240.00	0.15	0.70	100.80	
	New Culvert								
	Cross Road								
	Bottom Raft		6	1	6.60	1.30	0.20	10.30	
	Side Wall		6	2	6.60	0.20	0.70	11.09	
							Total Qty	652.73	7070.20	46,14,931.65
7	Supplying and fixing precast reinforced concrete slab 10 cm thick of mix M20 using 20mm and downsize graded granite metal using reinforcement 10mm dia steel at 150mm C/c both ways cost, transportation, hire charges of machinery, machine cutting the vertical face to get plain even surface etc., complete with all leads and lift conveyance charges, labour charges inclusive of cost of cost of all materials(data Rate enclosed)								

Sl. No	Description of Work	Unit	No	Dimension L	Dimension B	Dimension D	Quantity	Rate In Rs.	Amount In Rs.
	Approval Rate								
	For Damaged Cover Slab								
	BHEL layout								
	Ch:00-175 1st Main Road (Refixing Cover 130 m)	Sqm	2	65.00	0.90		81.00		
	Ch:00-100 1st Cross Road (Refixing Cover 50 m)		2	50.00	0.90		90.00		
	Ch:00-100 2nd Cross Road(Refixing Cover 50 m)		2	50.00	0.90		90.00		
	Ch:00- 100 3rd Cross Road (Refixing Cover 50 m)		2	50.00	0.90		90.00		
	Ch:00- 100 4th Cross Road (Refixing Cover 50 m)		2	50.00	0.90		90.00		
	Ch:00- 100 5th Cross Road (Refixing Cover 50 m)		2	50.00	0.90		90.00		
	Ch:00-240 2nd Main Road (Refixing Cover 120 m)		2	120.00	0.90		216.00		
						Total Qty	747.00	2337.00	17,45,739.00
8	Providing and laying Pre Cast Drain Cover slabs of 250mm thick of mix M20 using graded granite jelly 20mm down size with steel reinforcement, including from work, lift charges, curing and concrete finished surfaces on both side etc. complete and as per drawing and direction of Engineer-in-charge of work (data Rate enclosed)								
	Approval Rate								
	New Culvert								
	Cross Road	Sqm	6	6.60	1.30		51.48		
						Total Qty	51.48	5418.00	2,78,918.64
9	Providing and fixing Pre cast solid concrete kerb stones of size 450 x 200 x 400 mm made out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete.								
	KPWD S.R 2018-19	It. No. 5.29.1.		Pg.No. 27					
	New Kerb								
	Ch:00-175 1st Main Road (Refixing Kerb 140 m)	Nos	2	78			156		
	Ch:00-240 2nd Main Road (Refixing Kerb 160 m)		2	178			356		
						Total Qty	512	477.00	2,44,224.00
10	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications.								
	KPWD S.R 2018-19	It. No. 24.1.		Pg.No. 180					
	New Kerb								
	Ch:00-175 1st Main Road	Sqm	2	175.00		0.50	175.00		
	Ch:00-240 2nd Main Road		2	240.00		0.50	240.00		
						Total Qty	415.00	84.80	35,192.00
11	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications.								
	KPWD S.R 2018-19	It. No. 19.14		Pg.No. 143					
	Earth Work								
	BHEL layout								
	BC Road								
	BWSSB / Restoration Cutting								

Sl. No	Description of Work	Unit	No	Dimension L	B	D	Quantity	Rate in Rs.	Amount in Rs.
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road	Cum	1	295.00	0.90	0.35	92.93		
	Ch:00-175 1st Main Road		1	175.00	0.90	0.35	55.13		
	Ch:00-100 5th Cross Road		1	100.00	0.90	0.35	31.50		
	Ch:00-240 2nd Main Road		1	240.00	0.90	0.35	75.60		
	Road Across Cuttings		27	6.60	0.30	0.35	18.71		
	Pot Holes		26	1.00	1.00	0.35	9.10		
						Total Qty	282.96	57.03	16,136.64
12	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregatesof granite/trap/basalt material, mixing by mix in place method by rotavator at OMC, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications.								
	KPWD S R 2018-19	It. No.		20.60		Pg No.	153		
	BHEL layout	Cum.							
	BC Road								
	BWSSB / Restoration Cutting								
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road		1	295.00	0.90	0.15	39.83		
	Ch:00-175 1st Main Road		1	175.00	0.90	0.15	23.63		
	Ch:00-100 5th Cross Road		1	100.00	0.90	0.15	13.50		
	Ch:00-240 2nd Main Road		1	240.00	0.90	0.15	32.40		
	Road Across Cuttings		27	6.60	0.30	0.15	8.02		
	Pot Holes		26	1.00	1.00	0.15	3.90		
						Total Qty	121.27	1855.00	2,24,955.85
13	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.								
	KPWD S.R 2018-19	It. No.		20.18		Pg.No.	155		
	BHEL layout	Cum							
	BC Road								
	BWSSB / Restoration Cutting								
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road		1	295.00	0.90	0.20	53.10		
	Ch:00-175 1st Main Road		1	175.00	0.90	0.20	31.50		
	Ch:00-100 5th Cross Road		1	100.00	0.90	0.20	18.00		
	Ch:00-240 2nd Main Road		1	240.00	0.90	0.20	43.20		
	Road Across Cuttings		27	6.60	0.30	0.20	10.69		
	Pot Holes		26	1.00	1.00	0.20	5.20		
						Total Qty	161.69	2001.28	3,23,586.96
14	KSRRB 300-58. Compaction of original ground by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.								
	KPWD S.R 2018-19	It. No.		19.64		Pg.No.	147		
	BHEL layout	Sqm							
	BC Road								
	BWSSB / Restoration Cutting								
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road		1	295.00	0.90		265.50		
	Ch:00-175 1st Main Road		1	175.00	0.90		157.50		
	Ch:00-100 5th Cross Road		1	100.00	0.90		90.00		
	Ch:00-240 2nd Main Road		1	240.00	0.90		216.00		
	Road Across Cuttings		27	6.60	0.30		53.46		

No	Description of Work	Unit	No	Dimension L	Dimension B	Dimension D	Quantity	Rate In Rs.	Amount in Rs.
	Pot Holes								
15			26	1.00	1.00		26.00		
						Total Qty	808.46	6.36	5,141.81

KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.

KPWD S.R 2018-19 — It. No. 21.6 — Pg.No. 158

BHEL layout									
BC Road									
BWSSB / Restoration Cutting									
Ch:00-295 Sri Liakshmi Venkateshwara OPP Road	Sqm	1		295.00	0.90		265.50		
Ch:00-175 1st Main Road		1		175.00	0.90		157.50		
Ch:00-100 5th Cross Road		1		100.00	0.90		90.00		
Ch:00-240 2nd Main Road		1		240.00	0.90		216.00		
Road Across Cuttings		27		6.60	0.30		53.46		
Pot Holes		26		1.00	1.00		26.00		
						Total Qty	808.46	33.92	27,422.96
16									

Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications and as per directoins of the Engineer in charge of work.

KPWD S.R 2018-19 — It. No. 21.2 — Pg.No. 158

KPWD S.R 2018-19									
Best county-II									
Ch:00-295 Sri Liakshmi Venkateshwara OPP Road	Sqm	1		295.00	6.60		1947.00		
Ch:00-175 1st Main Road		1		175.00	5.50		962.50		
Ch:00-100 5th Cross Road		1		100.00	5.50		550.00		
Ch:00-240 2nd Main Road		1		240.00	5.50		1320.00		
						Total Qty	4779.50	5.30	25,331.35
17									

KSRRB 500-11. Providing and laying bituminous macadam using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.4% VG-30 Bitumen on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat & including lead, lift and cost of all materials, labour, HOM complete as per specifications.

KPWD S.R 2018-19 — It. No. 21.11.6 — Pg.No. 159

BHEL layout									
BC Road									
BWSSB / Restoration Cutting									
Ch:00-295 Sri Liakshmi Venkateshwara OPP Road	Cum	1		295.00	0.90	0.05	13.28		
Ch:00-175 1st Main Road		1		175.00	0.90	0.05	7.88		
Ch:00-100 5th Cross Road		1		100.00	0.90	0.05	4.50		
Ch:00-240 2nd Main Road		1		240.00	0.90	0.05	10.80		
Road Across Cuttings		27		6.60	0.30	0.05	2.67		
Pot Holes		26		1.00	1.00	0.05	1.30		
BM for Profile Correction 15%		1		4779.50	0.15	0.05	35.85		
						Total Qty	76.27	5962.50	4,54,759.88

Sl. No	Description of Work	Unit	No	Dimension L	B	D	Quantity	Rate in Rs.	Amount in Rs.
18	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications.								
	KPWD S.R 2018-19	It. No.	21.7.	Pg No.	158				
	BC Overlay								
	BHEL layout								
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road	Sqm	1	295.00	6.60		1947.00		
	Ch:00-175 1st Main Road		1	175.00	5.50		962.50		
	Ch:00-100 5th Cross Road		1	100.00	5.50		550.00		
	Ch:00-240 2nd Main Road		1	240.00	5.50		1320.00		
						Total Qty	4779.50	12.72	60,795.24
19	Providing and laying bituminous concrete 40mm thick with hot mix plant, using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminous binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015.								
	KPWD S.R 2018-19	It. No.	21.78.12.	Pg.No.	162				
	BC Overlay								
	BHEL layout								
	Ch:00-295 Sri Liakshmi Venkateshwara OPP Road	Cum	1	295.00	6.60	0.04	77.88		
	Ch:00-175 1st Main Road		1	175.00	5.50	0.04	38.50		
	Ch:00-100 5th Cross Road		1	100.00	5.50	0.04	22.00		
	Ch:00-240 2nd Main Road		1	240.00	5.50	0.04	52.80		
						Total Qty	191.18	8699.42	16,63,155.12
20	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.								
	KPWD S.R 2018-19	It. No.	24.15	Pg.No.	182				
	Edge lane	Sqm	1 2	810.00	0.15		243.00		
	Road Both Side		1	405.00	0.10		40.50		
	Road Centor					Total Qty	283.50	454.74	1,28,918.79
21	Direction and Place Identification Signs with size morethan 0.9 Size Board: Providing and erecting direction and place identification retro -reflectorised sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm , 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing.								
	KPWD S.R 2018-19	It. No.	24.4.	Pg.No.	180				
	Edge lane	sqm	3	0.90	0.90		2.43	7557.80	18,365.45
	Road Both Side						Total Constrution cost		147,81,648.87
							GST 12%		17,73,797.86
							Design Report,Proof Checking & PMC Amount		3,50,000.00
							KRIDL Charges 4%		5,91,265.95

Construction of RCC Drains and Culverts at BHEL layout and Ayyappa layout and surrounding area in ward No :03, Yelahanka Satellite Town sub Division

Sl. No	Description of Work	Unit	No	Dimension			Quantity	Rate in Rs.	Amount in Rs.
				L	B	D			
								Sub Total	174,96,712.68
								Miscellaneous & Rounding Off	3,287.32
								Grand Total	175,00,000.00

Certificate:-

1. The workspot was inspected and work is found to be necessary.
2. The area comes within the Bruhat Bangalore Mahanagara Palike Limits.
3. The rates adopted based on the PWD SR Bangalore Circle for year 2018-19
4. The provisions made in the estimate are necessary and essential.

SRI SAI CONSULTANTS BANGALORE-80

Consultant
For Sri Sai Consultants

Assistant Engineer
Ward no. 03
BBMP - Bangalore

Assistant Executive Engineer
Yelahanka Sub Division
BBMP - Bangalore

Executive Engineer
Yelahanka Division
BBMP - Bangalore

Administrative Sanction for Rs. 175.00 lakhs one crore seventy five lakh only is accorded under head P.3749 CM Navanagarothana No. Village grants Annexure-07 Registered as CE No. .. Subject to conditions contained in this office No. EE/YNK/551/2019-20 Dt. 7/11/2019

Executive Engineer

Technical Sanction Accorded For RSI already
Head of A/C. P.3749
CER NO : 197 Dt: 08.11.2019

AA CE (YNK)